



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 1
5 Post Office Square, Suite 100
BOSTON, MA 02109-3912

April 8, 2010

W. Michael Sullivan, Director
Rhode Island Department of Environmental Management
235 Promenade Street
Providence, RI 02908-5767
Re: Review and Action on Water Quality Standards Revisions

Dear Mr. Sullivan,

By letter of May 15, 2009, the Rhode Island Department of Environmental Management (RIDEM), Bureau of Land and Water Quality (DEP) submitted revisions to its surface water quality standards for United States Environmental Protection Agency (EPA) review. The revisions, by statute, were adopted and became effective June 2, 2009, and were certified on May 27, 2009 by RIDEM's Legal Counsel as having been duly adopted pursuant to state law. EPA responded with an approval letter which was sent to RIDEM March 2, 2010. This initial response was mistakenly undated and also did not include an explanation regarding our continued review of the proposed site specific dissolved copper criteria. This letter is intended to correct both of those conditions and replaces the previous response.

EPA has completed its review of the submitted revisions as further described below.

Pursuant to Section 303(c)(2) of the Clean Water Act and 40 CFR Part 131, I hereby approve the following water quality standard revisions, except as noted:

- Amendment to Appendix A (waterbody list and classification descriptions) to identify coldwater and warmwater fishery designations (see draft fishery designation maps on DEM's website at <http://www.dem.ri.gov/maps/index.htm> under Environmental Resource maps).
- Change of water quality classification in Appendix A for Prince's Pond (Barrington) from freshwater (Class A) to saltwater (Class SA) to more accurately reflect salinity conditions.
- Amendment to Table 4 of Appendix B (site specific metals criteria for portions of the Pawtuxet River) to correct the slope and intercept portion of the criteria equation for three metals which were inadvertently not updated in 2006 to reflect the new EPA criteria as were correctly updated in Table 2 of Appendix B.

We are still reviewing the amendment to Table 1 of Appendix B of the Regulations to include site specific dissolved copper criteria for the Blackstone River, Ten Mile River (including the run-of-the-river impoundments) and Woonasquatucket River from the Smithfield WWTF discharge to the confluence with the Moshassuck River. The

amendment would result in a nearly 3 fold increase in the acute and chronic copper criteria for these waters. The justification provided by RIDEM for this change is derived from a Water-Effects Ratio (WER)¹ derived for Connecticut waters using toxicity testing conducted in Connecticut in the mid 1990s. EPA's 2001 guidance² provides a streamlined procedure for determining WER values that requires site-specific sampling and analysis and toxicity testing. Since no site-specific results have, thus far, been provided as justification for the amendment, we are not taking action with respect to these revisions at this time. Unless and until such site specific criteria are approved, they are not applicable for Clean Water Act purposes, including for purposes of RIPDES permitting, 303(d) listing decisions, TMDLs, and Clean Water Act § 401 water quality certifications. Instead, the current, hardness dependent copper criteria remain the applicable criteria.

EPA's approval of Rhode Island's surface water quality standards revisions does not extend to waters that are within Indian territories and lands. EPA is taking no action to approve or disapprove the State's revisions with respect to those waters at this time. EPA will retain responsibility under Sections 303(c) and 303(d) of the Clean Water Act for those waters.

Supporting Discussion of Approvals

Cold Water and Warm Water Fishery Designations

These revisions refine aquatic life uses by providing definitions for cold and warm water fisheries and by identifying specific fresh water bodies as cold water or warm water fish habitat (fisheries). Corresponding dissolved oxygen criteria for each new category as well as temperature criteria specifically for cold water fisheries were already included in Rhode Island's water quality standards.

EPA's approval of these revisions is based on the supporting documentation provided by RIDEM which documents the investigations conducted to identify cold water habitat. RIDEM used field investigation, historical data, and best professional judgment to identify existing, former or potential habitat for cold water fish.

EPA finds that these revisions enable improved protection of aquatic life designated uses in Rhode Island.

Reclassification of Prince's Pond from Freshwater to Saltwater

Freshwaters are defined in the Rhode Island water quality standards (Water Quality Regulations Rule 7) as those waters of the State in which the natural level of salinity is equal to or less than 1 part per thousand (ppt), 95 percent or more of the time. Saltwaters are defined in the Water Quality Regulations as those waters of the State in which the natural level of salinity is equal to or greater than 10 parts per thousand, 95 percent or

¹ Water-Effects Ratio is a criteria adjustment factor accounting for the effect of site-specific water characteristics on pollutant availability and toxicity to aquatic life.

² EPA, 2001, "Streamlined Water-Effect Ratio Procedure for Discharges of Copper", EPA-822-R-01-005.

more of the time. These definitions are consistent with national guidance on the applicability of freshwater and saltwater aquatic life criteria.³

RIDEM has based the reclassification of Prince's Pond to saltwater, SA, on review of salinity data collected there from 1997 through 2007. In Prince's Pond salinity concentrations ranged from 5.6 to 29 ppt in 178 samples taken at depths from 1 to 3.5 feet. Since none of the samples indicated salinity less than 1 ppt, EPA agrees that Prince's Pond is not a freshwater.

Review of the salinity data shows that the salinity levels in Prince's Pond are equal to or greater than 10 ppt, only 80% of the time. Therefore, statistical analysis of the salinity data for Prince's pond indicates a water body that does not fit precisely within the salinity definition of saltwater provided in state and federal regulations. Although not addressed by RI's regulations, EPA offers the following guidance for the applicability of freshwater and saltwater aquatic life criteria in such situations:

"For waters in which the salinity is between 1 and 10 parts per thousand the applicable criteria are the more stringent of the freshwater or saltwater criteria, as described in items (1) and (2) of this section. However, an alternative freshwater or saltwater criterion may be used if scientifically defensible information and data demonstrate that on a site-specific basis the biology of the water body is dominated by freshwater aquatic life and that freshwater criteria are more appropriate; or conversely, the biology of the water body is dominated by saltwater."

RIDEM has documented observations of the presence of brackish water species of fish and vegetation and the lack of obligate fresh water species in and around Prince's Pond to further support the classification of saltwater. Therefore, EPA agrees that there is scientific basis to reclassify Prince's Pond as a saltwater body even though the salinity data indicate an imprecise fit. This judgment is based on review of the salinity data as well as RIDEM's observations of biota assemblages.

Updates to Site Specific Criteria Equation Constants

RIDEM submitted revisions to update Rhode Island's numeric criteria for toxic pollutants to EPA for approval by letter of June 23, 2006. EPA approved these revisions in a letter dated January 4, 2007. The revision included an update to the constants used to calculate hardness dependent criteria for metals in Table 2 of Appendix B. The same constants are used in calculations, provided in Table 4 of Appendix B, to derive site specific fresh water criteria for metals in two segments of the Pawtuxet River classified as B1. However, in the 2006 revision, RIDEM inadvertently neglected to revise the corresponding constants in Table 4. EPA approves this revision for the same reasons cited in the January 4, 2007 letter.

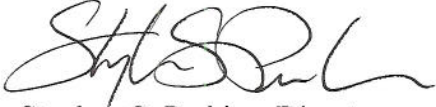
³ EPA, National Guidance on the Applicability of Freshwater and Saltwater Criteria, on page 9 of *National Recommended Water Quality Criteria: 2002*, EPA-822-R-02-047.

W. Michael Sullivan

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We look forward to continued cooperation with Rhode Island in the development, review and approval of water quality standards pursuant to our responsibilities under the Clean Water Act. Please contact Ellen Weitzler (617-918-1582) if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'Stephen S. Perkins', written in a cursive style.

Stephen S. Perkins, Director
Office of Ecosystem Protection

Cc: Alicia M. Good, RIDEM
Angelo Liberti, RIDEM
Connie Carey, RIDEM
Tom Chapman, USFWS
Mary Colligan, Protected Resources, NMFS
Peter Colossi, Habitat Conservation Division, NOAA
Gregory Stapleton, EPA SSB
Steve Winnett, EPA